

Quiz 6

- 1) Find the Inverse:

$$f(x) = \frac{x+4}{x-3}$$

- 2) Show the functions are inverses by showing
- $f(g(x)) = x$

$$f(x) = 2x + 3 \quad \text{and} \quad g(x) = \frac{x-3}{2}$$

- 3) Solve for x

$$3^{x^2} \cdot 81^x = \frac{1}{27}$$

- 4) Solve for x

$$4^{x^2+2} - 9 \cdot 2^{x^2+2} + 8 = 0$$

- 5) Expand

$$\log_m \frac{a^3 b^4}{m^5 n^9}$$

- 6) Write as a single log:

$$\frac{1}{2} \log_a x + 4 \log_a y - 3 \log_a x$$

- 7) If
- $\log_b 2 = 0.3562$
- ,
- $\log_b 3 = 0.5646$
- ,
-
- and
- $\log_b 5 = 0.8271$
- find:
- $\log_b 18$